

REMARKS

The Office Action mailed January 24, 2003, has been carefully reviewed and the following remarks and amendment have been made in consequence thereof.

Claims 1-3, 5-9, 11-16, and 18 are now pending in this application. Claims 1-3, 5-9, 11-16, and 18 stand rejected.

The objection to the drawings under 37 C.F.R. 1.83(a) is respectfully traversed. Submitted herewith is a Request for Approval of Drawing Changes. Specifically, Figures 2, 4, and 5 have each been amended to exchange respective reference characters Ps and Pd adjacent aircraft control shutoff valve 70. Furthermore, Figures 2 and 5 have also been amended to change the direction of the flow arrow within line 66 to point upwardly. Upon approval of the drawing changes, Applicant will submit substitute formal drawings incorporating the above-noted change. No new matter has been added. For the reasons set forth above, Applicant respectfully requests the objection to the drawings be withdrawn.

The rejection of Claims 1-3, 5-9, 11-16, and 18 under 35 U.S.C. § 112, first paragraph, is respectfully traversed. Applicant respectfully submits that one of ordinary skill in the art, after reading the specification in view of the Figures, would determine that the subject matter in the specification is described in such a manner as to reasonably convey that the Applicant had possession of the claimed invention, at the time the application was filed. More specifically, as originally filed, Claim 1 recited "coupling a fuel system interface to the gas turbine engine such that the fuel system interface receives electrically and mechanically originated over-speed signals inputted from the engine...", Claim 6 recited "said interface configured to receive electrically and mechanically originated over-speed signals from the engine...", and Claim 13 recited "a fuel system interface coupled to said fuel delivery system and configured to receive a plurality of electrically and mechanically originated over-speed signals from the engine...." Claims 2, 3, and 5 depend from Claim 1, Claims 7-9, 11, and 12, depend from Claim 6, and Claims 14-16 and 18 depend from Claim 13. Under 35 U.S.C. § 112, an applicant for a patent must include in the specification "one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." Accordingly, Applicant respectfully submits that claims 1, 6, and 13 are a part of the specification and as originally filed, do provide support for a fuel system that receives electrically and mechanically originated over-speed signals.

Furthermore, Applicant respectfully disagrees with the assertion in the Office Action “that one of ordinary skill in the art would not know how the electrical and mechanical speed sensors would operate in conjunction with each other, and how they would interface with the fuel control system.” The Federal Circuit has opined in *Verve LLC v. Crane Cams, Inc.*, 65 USPQ 2d 1051, 1053-1054 (Fed. Cir. 2002), that “[p]atent documents are written for persons familiar with the relevant field; the patentee is not required to include in the specification information readily understood by practitioners, lest every patent be written as a comprehensive tutorial and treatise for the generalist, instead of a concise statement for persons in the field.” In the present case, Applicant respectfully submits that the specification is complete and that one skilled in the art would understand how the fuel system interface receives electrically and mechanically originated over-speed signals. In addition, Applicant also submits that one of ordinary skill in the art would not need to understand how the electrical and mechanical speed sensors would operate in conjunction with each other, as the invention is not directed towards the interaction of the electrical and mechanical speed sensors, but rather is directed towards a fuel system interface that receives electrically and mechanically originated over-speed signals from the engine.

In addition, Applicant respectfully disagrees with the assertion in the Office Action that the specification, for example, at page 6, line 15, only supports one overspeed signal. Rather, Applicant submits that one of ordinary skill in the art would recognize that the priority logic table illustrated in Figure 3 illustrates conditions under which engine fuel flow may be initiated based on the various combinations of signals shown in Figure 3. Moreover, “resolution of any ambiguity may be aided by extrinsic evidence of usage and meaning of a term in the context of the invention” such that the determining factor regarding the meaning of a term, is “how the phrase would be understood by persons experienced in the field...upon reading the patent documents.” As such, Applicant respectfully submits that an artisan of ordinary skill in the art would recognize that within the priority logic table, various operating combinations are shown which include an overspeed signal, and that the phrase “fuel flow can only be initiated when the overspeed signal is removed” refers to various operating conditions that must be satisfied.

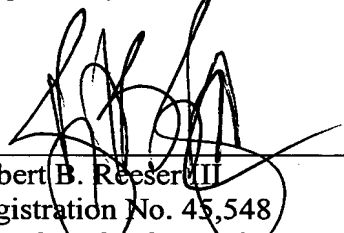
Accordingly, Applicant respectfully submits that one of ordinary skill in the art, after reading the specification in light of the Figures, would understand the present invention as recited in Claims 1-3, 5-9, 11-16, and 18. Accordingly, Applicant submits that one skilled in

the art, would also determine that the claimed subject matter claimed is described in the specification in such a way as to reasonably convey to one of skilled in the art that the Applicant did in fact have possession of the claimed invention, at the time the application was filed. For at least the reasons set forth above, Applicant requests the Section 112, first paragraph, rejections of Claims 1-3, 5-9, 11-16, and 18 be withdrawn.

The rejection of Claims 1-3 and 5 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. Claim 1 has been amended at line 4 to delete "at least one of." Claims 2, 3, and 5 depend from Claim 1. For at least the reasons set forth above, Applicant requests the Section 112, second paragraph, rejections of Claims 1-3, and 5 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited

Respectfully Submitted,

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Kail L. Linebrink

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For: METHODS AND APPARATUS FOR ROTOR
OVER-SPEED PROTECTION

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Sir:

Below are marked up Claims in accordance with 37 C.F.R. Section 1.121(c)(1)(ii).

IN THE CLAIMS

1. (three times amended) A method for assembling a gas turbine engine to prevent rotor over-speeding, said method comprising the steps of:

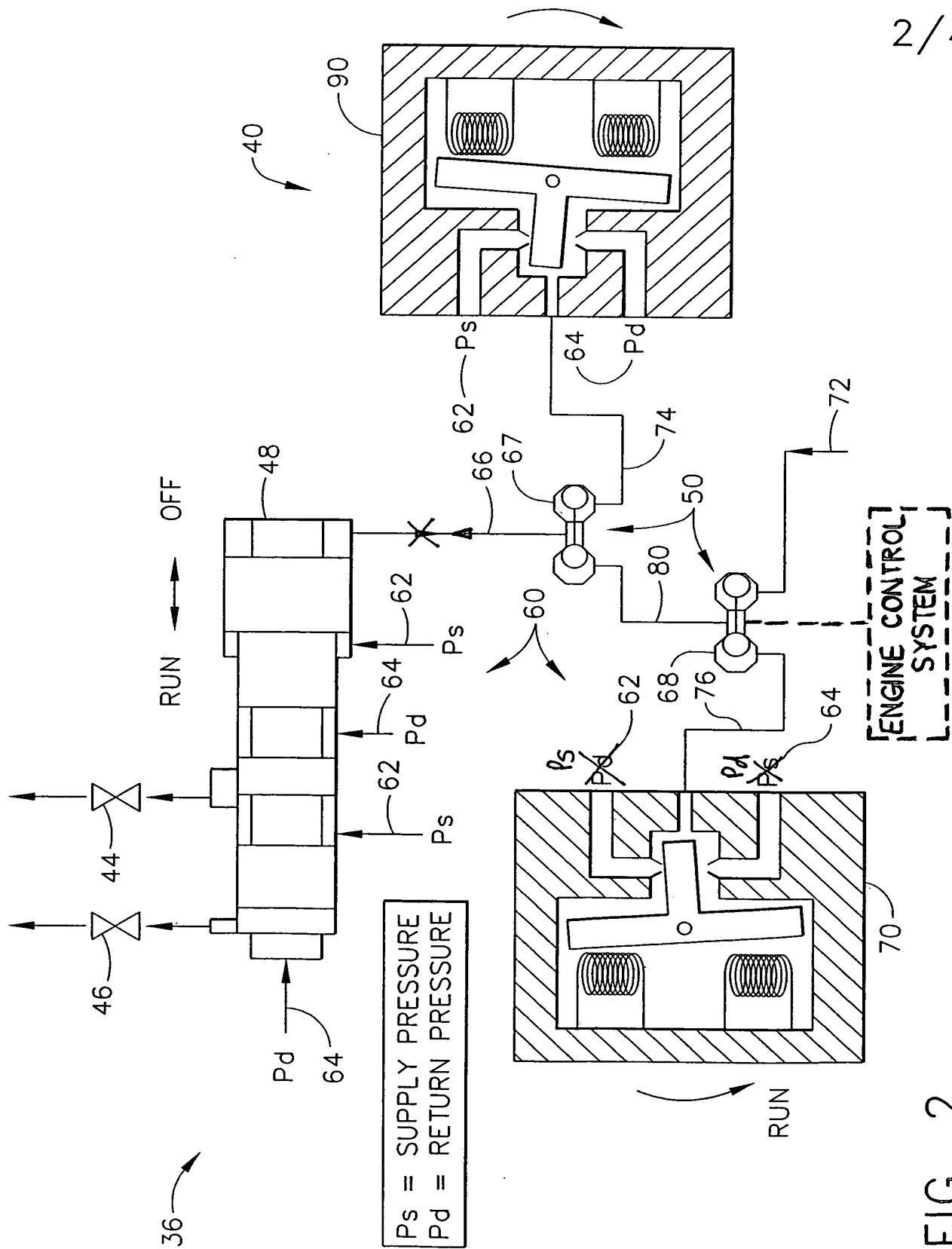
coupling a fuel system interface including a shutoff shuttle valve to the gas turbine engine such that the fuel system interface receives [at least one of] electrically and mechanically originated over-speed signals inputted from the engine; and

coupling the fuel system interface shutoff shuttle valve to the fuel system to stop engine fuel flow in response to the over-speed signals received, and based on pre-defined priority selection logic that relates a plurality of different gas turbine engine operating conditions to the overspeed signals and provides that when the fuel system interface is activated, as a result of receiving an over-speed indication, fuel flow is only initiated when each over-speed signal is removed.

Respectfully Submitted,

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ROTOR OVERSPEED PROTECTION
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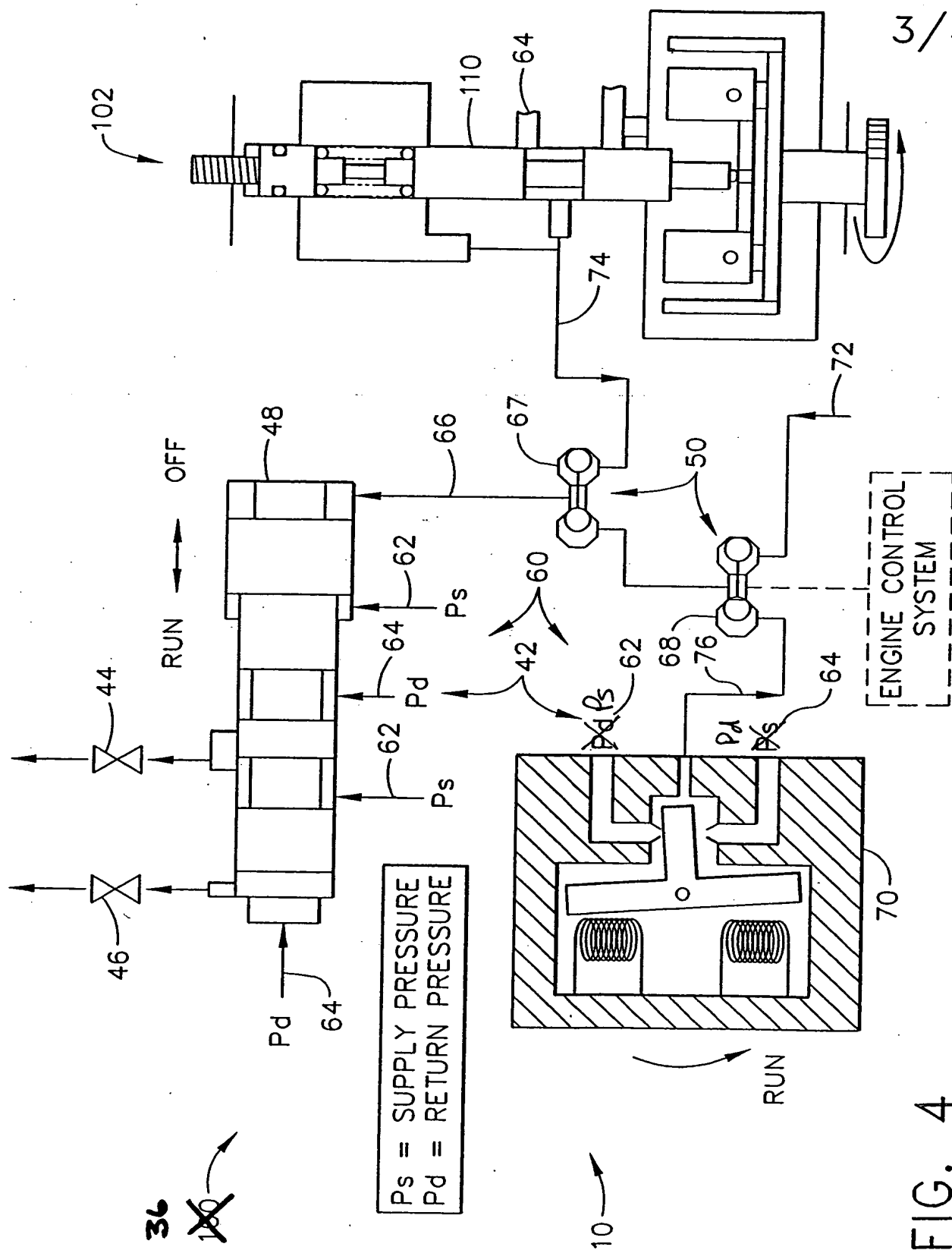


FIG. 4

